

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **Shu KOBAYASHI et al.**

Application Number: **Not yet Assigned**
(§371 of international application No. PCT/JP2005/001434)

Filed: **July 28, 2006**

For: **METHOD OF CATALYTIC REACTION USING MICRO-REACTOR**

Attorney Docket Number: **062844**

Customer Number: **38834**

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

July 27, 2006

Sir:

In compliance with 37 C.F.R. §1.56, Applicants direct the attention of the Patent and Trademark Office to the documents listed on the attached PTO/SB/08. A copy of each non- U.S. document is enclosed herewith.

If there are any fees due in connection with the filing of this paper, please charge Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP


Stephen G. Adrian

Attorney for Applicants

Registration No. 32,878

Telephone: (202) 822-1100

Facsimile: (202) 822-1111

SGA/yap

Enclosure: PTO/SB/08, 11 documents and international search report.

IAP5 Rec'd PCT/PTO 28 JUL 2006

Combined Form PTO/SB/08A&B <u>INFORMATION DISCLOSURE</u> <u>STATEMENT BY APPLICANT</u> <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	New Application
				Confirmation Number	10/587895
				Filing Date	July 28, 2006
				First Named Inventor	Shu KOBAYASHI et al.
				Art Unit	
				Examiner Name	
Sheet	1	of	1	Attorney Docket Number	062844

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code ² (if known)		
		US			

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
/R.R./	1	WO	99/22857	A1	05-14-1999	British Nuclear Fuels PLC	Cited in ISR

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.		Translation ⁶
/R.R./	2	J. KIJ I et al.; "A Convenient Route to β,γ -Unsaturated Esters without Formation of the α,β -Isomer. Palladium-Catalyzed Alkoxycarbonylation of Allylic Halides under Alcohol-Potassium Carbonate Two-Phase Conditions"; Bull. Chem. Soc. Jpn., Vol. 69, pgs.1029-1031, 1996. Cited in ISR (no month)		
/R.R./	3	Ryo AKIYAMA et al.; "The Polymer Incarcerated Method for the Preparation of Highly Active Heterogeneous Palladium Catalysts"; J. AM. Chem. Soc., Vol. 125, pgs. 3412-3413, 2003. Cited in ISR (March)		
/R.R./	4	Shokubai Kogaku Koza 6, "Shokubai Hanno (1) Suisanka", Chijinshokan Co., Ltd., Feb. 10, 1965, pg. 224; 4.1.2 Suisanka Hanno ni Shiyosuru Shokubai. Cited in ISR (no month)		
/R.R./	5	"Sesshoku Suisanka Hanno – Yuki gosei eno Oyo-", Kabushiki Kaisha Tokyo Kagaku Dojin, April 10, 1987, pg. 41; 1.4 Sen'I Kinzoku Sakutai Shokubai no Chosei, pg. 46, 1.4.4. Pallidium Sakutai. Cited in ISR (no month)		
/R.R./	6	J. KOBAYASHI et al.; "A Microfluidic Device for Conducting Gas-Liquid-Solid Hydrogenation Reactions"; Science, Vol. 304, No. 5675, pgs. 1305-1308, 2004. Cited in ISR (May)		
/R.R./	7	R. S. BESSER et al.; "Hydrocarbon hydrogenation and dehydrogenation reactions in microfabricated catalytic reactors"; Chemical Engineering Science, Vol. 58, pgs. 19-26, 2003. Cited in the Spec. (no month)		
/R.R./	8	K. JÄHNISCH et al.; "Direct fluorination of toluene using elemental fluorine in gas/liquid microreactors"; Journal of Fluorine Chemistry, Vol. 105, pgs. 117-128, 2000. Cited in the Spec. (no month)		
/R.R./	9	R. D. CHAMBERS et al.; "Microreactors for elemental fluorine"; Chem. Comm. , pgs. 883-884, 1999. Cited in the Spec. (no month)		
/R.R./	10	M. W. LOSEY et al.; "Microfabricated Multiphase Packed-Bed Reactors: Characterization of Mass Transfer and Reactions", Ind. Eng. Chem. Res., Vol. 40, pgs. 2555-2562, 2001. Cited in the Spec. (May)		
/R.R./	11	Ryo AKIYAMA et al.; "The Polymer Incarcerated Method for the Preparation of Highly Active Heterogeneous Palladium Catalysts"; JACS Communications, J. Am. Chem. Soc., Vol. 125, pgs.3412-3413; 2003. Cited in the Spec. (no month)		
	12	International Search Report of PCT/JP2005/001434, date of mailing March 29, 2005		

Examiner Signature	/Renee Robinson/	Date Considered	11/05/2008
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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